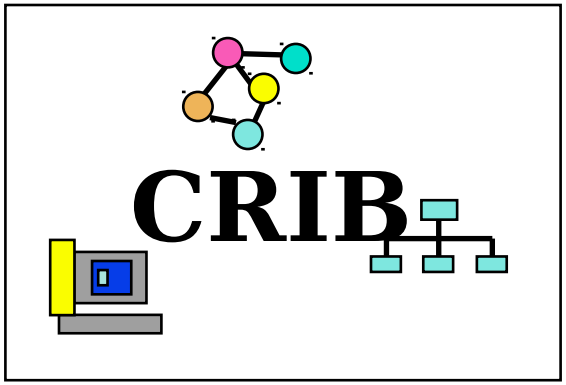
Computer Resources Information Base (CRIB) Overview



Agenda

- **Background**
- **Definitions**
- **Demonstration**
- **Current Status**
- **CRIB Future Plans**
- **Discussions**

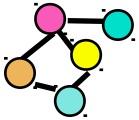
Background

- **CRIB is a major component of the Computer Open Systems Implementation Program (COSIP).**
- **COSIP provides an engineering and acquisition mechanism for the introduction of commercial and Open System technologies into Navy Combat Systems.**
- **The COSIP approach involves the evaluation and characterization of commercial products in terms of Open Systems standards.**
- **CRIB is the database/expert system designed to hold and utilize the evaluation results.**
- **The AN/UYQ-70(V) program was founded on the principles of COSIP.**

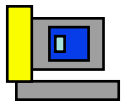
CRIB

- **Interactive decision-support system that facilitates the systems engineering process.**

- **System consists of three parts:**
  - **Database, containing vendor supplied data, COSIP-evaluation data, and project history.**



  - **Knowledgebase, capturing a wide range of product and system engineering experience.**
  - **Graphical User Interface (GUI), designed using human factors engineering principles.**



CRIB Capabilities

- **CRIB provides:**
  - **Browse capability (electronic catalog)**
  - **Compare capability which allows user to compare two or more products**
  - **Searches based on user specified requirements**

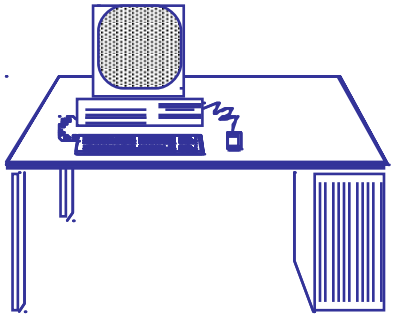
- **Allows user to define requirements at component level or system level in terms of:**
  - **Performance**
  - **Environment**
  - **Support**
  - **History**
  - **Cost**
  - **Platform**
  - **Vendor**

CRIB System Configurations

PERSONAL COMPUTER

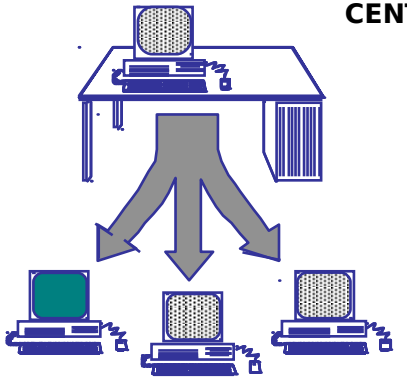
- 80486 (minimum)
- MS-DOS VERSION 5.0 OR GREATER
- MS WINDOWS VERSION 3.1, 3.11 OR WINDOWS 95
- SMART ELEMENTS
- ORACLE 7

WORKSTATION



- TAC III, SUN, VAXSTATION
- UNIX, VMS
- SMART ELEMENTS
- ORACLE

CENTRALIZED WORKSTATIONS



- TAC III, SUN, VAXSTATION
- UNIX, VMS
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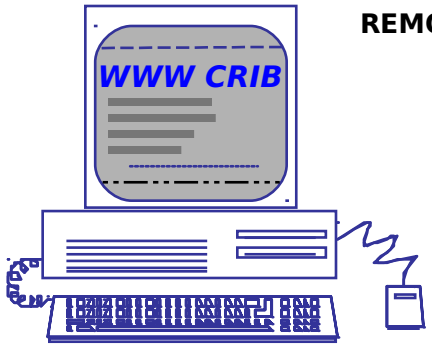
- ORACLE 7

PC, VAXSTATION

- MS-DOS , VMS
- XWINDOWS OR WINDOWS EMULATOR

REMOTE ACCESS (ON-LINE CRIB)



- PC, WORKSTATION
- MS-DOS& WINDOWS, UNIX
- WEB BROWSER

CRIB Demonstration

- **Portable PC**
  - **Hardware: Tadpole P1000 (Pentium 100MHz processor) with 32M RAM**
  - **Software: MS-DOS, MS Windows 3.11, Oracle 7**
- **Standalone CRIB v. 3.1.0 (software running locally with database resident on PC)**

Current Status - CRIB

- **The following matrix shows the status of capability implementation between the standalone and Web accessible versions of CRIB**

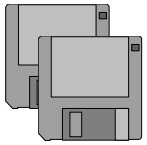
Capabilities	Standalone CRIB V3.1.0	WWW CRIB V1.7.0
Browse by Component Type	fully implemented	fully implemented
Browse by Vendor	fully implemented	fully implemented
Product Information	fully implemented	fully implemented
Compare	fully implemented	fully implemented
Single-Component Search	fully implemented	fully implemented
Single-Component Expert Reasoning (i.e. Minimum Set, Pre-search Guidance, Product Guidance, Validation, Risk)	fully implemented	partially implemented (Guidance and Risk)
Multi-Component Search	fully implemented	partially implemented
Multi-Component Expert Reasoning (i.e. System Guidance, System Risk, Integrated Sets)	fully implemented, system rulebase lacking	partially implemented
Help	fully implemented	partially implemented
SP/CR Feedback	fully implemented	partially implemented

Current Status - CRIB (cont.)

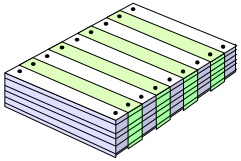
- **Number of Component Types: 37**
- **Number of Products: 5357**
- **Number of Vendors: 597**
- **Number of Standalone User Sites: 31**

Data Collection / Update

- **Methods used for data collection:**
  - **QUEST Electronic Questionnaire**



    - » **Developed with Neuron Data tools (using CRIB code)**
    - » **2 disks provide files for all component types**
  - **Paper Questionnaires**



  (Both are also available over the internet)

- **Each product in the CRIB database is on a six-month update schedule. To date, all vendors have been contacted for updates.**
- **Vendors can download own product data from web page.**

CRIB Installation Sites

DoD ACTIVITIES

- NAVSEA PMS 440
- NAVSEA PMS 428
- NUWC, NEWPORT, RI
- NSWC, DAHLGREN, VA
- NRAD, SAN DIEGO, CA
- NSWC, PORT HUENEME, CA
- NUWC, KEYPORT, WA
- PEO (TAD)
- NAWC, PATUXET RIVER, MD
- DISA
- ARMY, FORT BELVOIR, VA
- ARMY, FORT MONMOUTH, NJ
- AIR FORCE, HANSCOM AFB, MA
- AIR FORCE, WRIGHT PATTERSON AFB, OH
- NASA LaRC, HAMPTON, VA
- NAWC, LAKEHURST, NJ
- NATIONAL SECURITY AGENCY (NSA)
- FBI/CJIS

PRIVATE INDUSTRY

- CAE ELECTRONICS
- CDI
- CSTC
- ELS
- HUGHES AIRCRAFT
- IIT RESEARCH CORP.
- L-3 COMMUNICATION DISPLAY SYSTEMS
- LITTON DATA SYSTEMS
- LOCKHEED MARTIN TDS
- NORTHROP-GRUMANN
- ROCKWELL AVIONICS + COMM.
- SEI
- TEXAS INSTRUMENTS
- TRW

CRIB - Supported Programs

- AEGIS LIFE CYCLE COST MODELING (LCCM)
- AN/SQQ-89
- AN/UYQ-70(V)
- AN/WLY-1
- ARMY SOFTWARE REUSE CENTER
- DEFENSE INFORMATION SYSTEMS AGENCY - CENTER FOR SOFTWARE (DISA-CFSW)
- DEFENSE INFORMATION SYSTEMS AGENCY - CENTER FOR STANDARDS (DISA-CFS)
- DIMINISHING MANUFACTURING SOURCES AND MATERIALS SHORTAGES (DMSMS)
- DISPLAY ADVANCED RESEARCH PROJECTS AGENCY- HIGH DEFINITION DISPLAY SYSTEMS (DARPA (HDS))
- E-2C MISSION COMPUTER UPGRADE
- FEDERAL AVIATION ADMINISTRATION (FAA)
- GOVERNMENT ACCOUNTING OFFICE (GAO)
- ITEC (NAVY SIGNAL PROCESSING)
- MASS MEMORY STORAGE DEVICES (MMSD)
- NEW ATTACK SUBMARINE (NSSN) - (RELIABILITY, COST, SYSTEM SUPPORT)
- SELECT (ITT) RELIABILITY TOOL
- SHIPS SELF-DEFENSE SYSTEM (SSDS)

User Feedback

- **The Office of the Under Secretary of Defense for Acquisition and Technology (OUSD (A&T)) has included CRIB in their Software Tool Catalog of the Defense Acquisition Deskbook. This deskbook provides DoD acquisition information for all services across all functional disciplines.**

- **The Office of the Assistant Secretary of the Navy - Research, Development and Acquisition has identified CRIB in the Acquisition Center of Excellence (ACE) as one of the tools to improve the DoN acquisition processes.**

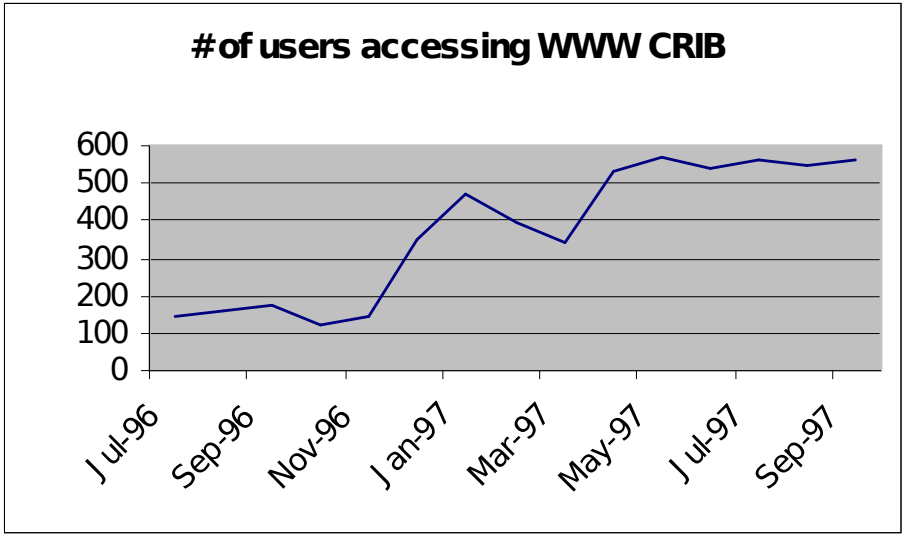
- **The New Attack Submarine (NSSN) program has utilized CRIB in an effort to perform bottom-up cost analysis at a combat system level. Component cost data from CRIB was directly fed into models to estimate costs of a new or modified piece of equipment, as well as recurring and non-recurring costs for the total combat system.**

User Feedback (cont.)

- **As a result of CRIB's demonstration at the Aegis LCCM meeting, we have been invited to the Surface Combatant COTS Symposium scheduled for the end of October. In addition, PMS400F312 (E. Chergoski) to recommend that CRIB be used program-wide, since it is a method for narrowing down a market survey for products to be evaluated during the full-blown selection process.**
- **Lockheed Martin Federal Systems Division, the developer of COTS Assessment and Select Tool (CAST) for the NSSN program, is interested in a collaboration effort with CRIB.**
- **The Government Accounting Office (GAO) is proposing that CRIB be used by the federal IRM community to provide information on year 2000 compliant hardware and software. We are working with GAO to accomplish this.**

WWW CRIB Statistics

- **For the month of September 1997, 565 unique User/Computer accesses**
  - **162 .mil**
  - **9 .gov**
  - **130 .com**
  - **12 .edu**
  - **117 .net**
  - **3 .org**
  - **132 other**



Future Plans

- **Continue the database update process**
  - **Contact vendors**
  - **Extract product information from database and send to vendors for update**
  - **Vendors perform update and send data back**
- **Implement Digital Signal Processor (DSP) component type**
- **Enhance WWW CRIB capabilities**
  - **Single-component Expert reasoning**
  - **Multi-component Expert reasoning**
  - **Graphics User Interface (GUI) improvements**

CRIB Marketing Efforts

- **CRIB Representation at the Surface Combatant COTS Symposium at John Hopkins University/Applied Physics Laboratory, October 23-24**
- **COSIP Booth at the West Coast NATO AFCEA TECHNET Annual Symposium and Exposition, November 97**
- **Continuation of the CRIB-Select collaboration efforts**
- **Proceed with the CRIB-CAST (COTS Assessment and Select Tool) collaboration effort with the New Attack Submarine (NSSN) CCCI contractor. Meeting with LM FS has been scheduled for 15 October.**

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